

**WHAT IS CLAIMED IS:**

1. Thin porous layer with open porosity, manufactured from a mixture containing sinterable powder with a predetermined powder particle size distribution, whereby the sintered layer has a thickness which is at least triple the average diameter of the used powder particles, a defined pore diameter in a range of about 0.01 to 50 $\mu\text{m}$  and a tensile strength in a range of about 5 to 500 N/mm<sup>2</sup>.
2. Thin porous layer in accordance with claim 1, marked by a maximum thickness of about 500 $\mu\text{m}$ .
3. Thin porous layer in accordance with one of the above claims marked by self-supporting properties.
4. Thin porous layer in accordance with one of the above claims marked by a bubble-point pressure in a range of about  $8 \times 10^6$  to  $2 \times 10^3$  Pa.
5. Thin porous layer in accordance with one of the above claims marked by the content of inorganic and/or organic pore forming material in the mixture.
6. Thin porous layer in accordance with one of the above claims marked by a graded design.
7. Procedure for manufacturing thin porous layer with open porosity in accordance with one of the claims 1 to 6, whereby the layer is made up of a mixture containing sinterable powder and the sinterable powder with a predetermined size distribution of powder particles is suspended along with particles of the defined size as pore forming material is suspended in a carrier fluid. It is applied in at least one layer on a carrier body, dried and the green layer thus formed is sintered.
8. Procedure in accordance with claim 7 marked by the correspondence of the portion of pore forming materials in the suspension to the metallic layer to be produced in about the defined pore volume.
9. Procedure in accordance with claim 7 or 8 marked by the forming of the carrier fluid by the binding agent liquefied with a solvent.

10. Procedure in accordance with one of the claims 7 to 9 marked by the suspension of pore forming materials of different densities and/or sizes in the solvent for obtaining a graded layer design.
11. Procedure in accordance with one of the claims 7 to 10 marked by the application of the suspension in many partial layers one after another on the carrier body.
12. Procedure in accordance with one of the claims 7 to 11 marked by drying of the earlier partial layer before the application of the next partial layer.
13. Procedure in accordance with one of the claims 7 to 12 marked by the sintering of the earlier partial layer before application of the next partial layer.
14. Procedure in accordance with one of the claims 7 to 13 marked by the application of the suspension on the carrier body by the process of thin layer pouring, spraying or immersing.
15. Procedure according to one of the claims 7 to 14 marked by the application of the suspension on at least on one of the walls of a porous, preferably pipe-shaped carrier body made from sinterable material, dried and the green layer thus formed subsequently firmly sintered on the carrier body.
16. Procedure in accordance with one of the claims 7 to 15 marked by the rotation of the pipe-shaped carrier body around the axis of the pipe during application of suspension and at least during some part of the drying period.
17. Using a thin porous layer with open porosity in accordance with one of the claims 1 to 6 as filter material, catalyst, membrane reactor, friction substance, filter cartridge and/or filter pipe.